

DOCUMENT RESUME

ED 267 190

CE 043 709

TITLE Urban Horticulture: Scope and Sequence.
INSTITUTION Nashville - Davidson County Metropolitan Public Schools, Tenn.
SPONS AGENCY Tennessee State Dept. of Education, Nashville.
PUB DATE [84]
NOTE 50p.; For related documents, see CE 043 708-742.
PUB TYPE Guides - Classroom Use - Guides (For Teachers) (052)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Agricultural Education; *Articulation (Education); Behavioral Objectives; Competency Based Education; Course Content; Evaluation Criteria; Floriculture; *Horticulture; Insecticides; Landscaping; Nurseries (Horticulture); Ornamental Horticulture; Plant Growth; Plant Identification; Plant Propagation; Secondary Education; Soil Conservation; Student Evaluation; Urban Areas; *Urban Education; *Vocational Education
IDENTIFIERS Future Farmers of America; Gardening; Vegetables

ABSTRACT

This guide, which was written as an initial step in the development of a systemwide articulated curriculum sequence for all vocational programs within the Metropolitan Nashville Public School System, outlines the suggested scope and sequence of a 4-year program in urban horticulture. The guide consists of a course description; general course objectives; course content outlines for each semester of the four years of the program; and lists of recommended textbooks, curriculum guides, and audiovisual materials. Topics addressed in the four years of the program include the following: the Future Farmers of America, plant scientific names and terminology, plant identification, soil quality, soil protection and conservation, leadership training, plant science, plant growth, color in the florist industry, artificial corsages, plant propagation, insecticides, lawn care and turf management, mechanics in horticulture, vegetable gardens, fruit gardens, greenhouse management, flower arrangement, landscaping procedures, small power equipment, floral shop skills, preparation for a horticulture occupation, specialty crops, seedlings, nursery crops, roses, orchids, operation of a garden center, container gardening, provision of flowers for weddings, and spray programs for fruit. (MN)

* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *

TN 8413208

ED267190

URBAN HORTICULTURE

SCOPE AND SEQUENCE

CE043709



VOCATIONAL EDUCATION

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)

☒ This document has been reproduced as
received from the person or organization
originating it.

☐ Minor changes have been made to improve
reproduction quality.

• Points of view or opinions stated in this docu-
ment do not necessarily represent official NIE
position or policy.

"PERMISSION TO REPRODUCE THIS
MATERIAL HAS BEEN GRANTED BY

D. W. Allen

TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC)."

Metropolitan Public Schools
Nashville Davidson County, Tennessee
Charles O. Frazier, Director

FOREWORD

This scope and sequence guide, developed for the Urban Horticulture Vocational Education program, represents an initial step in the development of a systemwide articulated curriculum sequence for all vocational programs within the Metropolitan Nashville Public School System. It is a direct result of needs expressed by teachers, parents, and the business community for sequential structure within the vocational education curriculum. An articulated vocational curriculum allows a student to move from one level of instruction to the next without repeating learning tasks already mastered, and without experiencing gaps in the presentation of relevant instructional material.

A goal of this curriculum effort is to provide teachers a usable guide based on input from the teachers. The initial step was an identification of course content, with all teachers having an opportunity to contribute. What follows is a publication using the teachers' contributions: a sequential listing of objectives and skills for each program offering.

This guide does not include all specific resource materials that may be used to assist students in acquiring minimum competencies. It is to serve as a guide for the sequence of course content and scope of what is to be taught. This guide content is extremely important and its use is encouraged. The suggested competencies and resource materials allow instructors an opportunity to be creative and resourceful in meeting the needs of individual programs and students.

ACKNOWLEDGEMENT

Recognition and appreciation are extended to the following who worked so diligently in the development of these materials:

The Committee:

Instructors

Turner G. Binkley
Richard A. Brown
William D. Cook
Jeff Smedley

Schools

Whites Creek
Goodlettsville
Antioch
McGavock

Committee Coordinator: Preliminary Committee and Revision
Committee-Nelson J. Senter-Overton

Program Area: Forrest P. Wilson

Editorial Consultant/Design/Layout

Judy Beier - Commerical Art Instructor - Maplewood
Mary Jo Grady - Commercial Art Instructor - Pearl/Cohn
Joy Binkley - Editing
Dr. Jim Lorenz - Third Party Evaluator
Exemplary Project Staff
Vocational Program Coordinators

Printing/Binding/Typesetting/Technical Assistance

Sam White - Printing Instructor - Overton
Jesse Ray - Printing Instructor - Whites Creek
Cleve Yokely - Printing Instructor - Stratford
Kenneth Ford - Manager - Metropolitan Public School Binding
Robert Tucker - Director - Metropolitan Public School Printing Department
Jean Porter - Publications Specialist - Department of Communication and
Community Relations
Debbie Fulghum - Typesetter - Department of Communication and Community
Relations

INTRODUCTION

This instructional guide is designed to be used by all Urban Horticulture instructors. Additional instructional unit and reference materials may be added to this guide. It is suggested, however, that any rearranging or variation of unit placement be confined to the semester in which it is listed. The units are so placed to conform with Future Farmers of America (F.F.A.) contests which are scheduled during Fall and Spring semesters.

COURSE DESCRIPTION

Horticulture is one area of the agricultural industry and is the method of mass production of plants which are used in horticulture and landscape design. The horticultural course is designed to provide the students with basic skills needed for employment in the horticultural industry as well as a vocational enjoyment of horticultural plant materials.

Skills relevant to the horticultural industry such as: preparing and using soils; making cuttings; propagation of various plants; growing, harvesting and marketing plants and plant materials; making corsages and floral designs; using insecticides, pesticides, fungicides and other chemicals needed in the industry; operating nurseries, garden centers and florist shops; repairing and operating essential machines and equipment; making simple electrical, plumbing and woodworking installations and repairs are taught through the use of conventional classroom, greenhouse, shadehouse and land laboratory techniques.

Students are required to be members of the Future Farmers of America (F.F.A.) since this organization is an integral part of agricultural instruction by Federal Law. Students, therefore, participate in F.F.A. leadership training and in local, state and national contests and other contests.

GENERAL COURSE OBJECTIVES

1. To teach safety procedures in use of chemicals and machinery used in horticulture
2. To teach proper care and use of equipment used in horticultural occupations
3. To teach an overview of the horticultural industry
4. To teach procedures for starting, growing, harvesting and marketing horticultural plants
5. To teach corsage and floral arrangement, construction and pricing
6. To teach methods of propagation of horticultural plants
7. To teach pruning of trees and shrubs
8. To teach seeding, renovation and maintenance of turf
9. To teach soil evaluation techniques

COURSE CONTENT FOR HORTICULTURE I

(First Semester)

I. Orientation to horticulture and the F.F.A. (3 weeks)

Specific objectives:

To review school policy
To learn safety procedures
To be made aware of occupational opportunities
To be made aware of the Future Farmers of America (F.F.A.)
To be made aware of the F.F.A. history
To learn the F.F.A. Creed

- A. Becomes familiar with general policy
 - 1. School policy
 - 2. Classroom and greenhouse policy
- B. Learns about safety needs and rules in the greenhouse and equipment area
- C. Becomes aware of horticulture occupational opportunities
- D. Learns about Future Farmers of America
 - 1. History
 - 2. Creed
 - 3. Contests

II. Plant scientific names and terminology (1 week)

Specific objectives:

To learn the procedure for naming plants
To learn the terminology used in the horticultural industry

- A. Studies history of naming plants
 - 1. Method of naming plants
 - 2. Classification of plants

II. Plant scientific names and terminology continued:

- B. Learns terminology used in the horticultural industry

III. Introduction to plant characteristics used in identification (2 weeks)

Specific objectives:

To learn plant characteristics
To learn to identify horticultural plants

- A. Labels plant parts
- B. Identifies leaf shapes and forms
- C. Labels flower parts
- D. Identifies tree and plant shapes
- E. Names and identifies plants

IV. Evaluating soil quality (2 weeks)

Specific objectives:

To learn the origin of soils
To learn the importance of soil
To learn how to judge soils

- A. Learns how soils are formed
- B. Understands the Tennessee soils judging card
- C. Figures water holding capacities
- D. Figures lime requirements of soils
- E. Learns how to judge Tennessee soils

V. Protecting and conserving the soil (1 week)

Specific objective:

To learn the principles of conservation

- A. Studies conservation of soils
- B. Studies conservation of water

V. Protecting and conserving the soil continued:

- C. Studies conservation of wildlife

VI. Leadership training (3 weeks)

Specific objectives:

To learn the duties of various offices

To learn parliamentary procedure

- A. Becomes familiar with the duties of F.F.A. officers
 - 1. Requirements to become a local officer
 - 2. Requirements to become a state or national officer
- B. Understands main motions
- C. Understands subsidiary motions
- D. Understands incidental motions
- E. Understands privileged motions
- F. Understands unclassified motions

VII. Plant science (1 week)

Specific objectives:

To learn propagation of cuttings

To learn about the equipment and containers

- A. Identifies propagation tools and equipment
- B. Propagates softwood cuttings
- C. Propagates semi-hardwood cuttings
- D. Propagates hardwood cuttings
- E. Learns types of rooting hormones
- F. Understands sticking cuttings

VIII. Growing spring bulbs (1 week)

Specific objectives:

To learn the different kinds of bulbs
To prepare a planting chart
To learn about bulb forcing

- A. Identifies different kinds of bulbs
- B. Becomes familiar with planting dates of different bulbs
- C. Becomes familiar with blooming schedule of bulbs
- D. Understands appropriate depth of plant bulbs
- E. Precools bulbs
- F. Forces bulbs

IX. Color in the florist industry (1 week)

Specific objectives:

To learn about the use of color in the florist industry
To learn about color harmony

- A. Learns the color spectrum band
- B. Combines colors to achieve harmony
- C. Learns effects of color
- D. Uses florists' color wheel
- E. Identifies flowers which match the color wheel

X. Making artificial corsages (2 weeks)

Specific objectives:

To learn the skill of tying corsage bows
To learn the techniques in putting corsages together
To learn to make corsage nets and accessories

- A. Ties a 3-loop corsage bow
- B. Tapes and wires stems of flowers

X. Making artificial corsages continued:

- C. Combines flowers into 2, 3, 5 flower corsages
- D. Pinches nets to create attractive corsages
- E. Packages corsages

XI. Review and Testing (1 week)

Specific objectives:

To review materials covered to assure retention
To test to determine retention

- A. Reviews all material covered
- B. Completes final examination

COURSE CONTENT FOR HORTICULTURE I

(Second Semester)

I. Plant propagation by seeds (1 week)

Specific objectives:

To learn the parts of a seed and their function
To learn seeding methods
To learn how to prepare media
To learn the proper care of seedlings

- A. Identifies parts of seeds
- B. Selects and identifies seeds
- C. Mixes seeding media
- D. Understands direct seeding versus indirect seeding
- E. Learns care of seeds and seedlings
- F. Transplants seedlings
- G. Learns special treatment of seeds

II. Growing house plants (1 week)

Specific objectives:

To learn the requirements of house plants
To learn the media requirements of house plants
To learn the cultural requirements of house plants

- A. Demonstrates care of house plants
- B. Learns methods of watering
- C. Understands importance of providing cultural requirements
- D. Understands soil mixtures
- E. Learns potting and repotting procedures
- F. Learns methods of controlling diseases and insects

II. Growing house plants continued:

- G. Uses the house plant chart

III. Insecticides (2 weeks)

Specific objectives:

To learn the identification of insects
 To learn the selection of proper insecticides
 To learn the proper application of insecticides
 To learn the proper safety methods

- A. Identifies common insect pests and their control
- B. Learns natural insect control methods
- C. Understands composition of chemicals
- D. Understands how insecticides kill
- E. Learns methods of application
- F. Identifies insect damage
- G. Demonstrates proper handling of insecticides
- H. Understands timing of chemical applications

IV. Establishing and care of lawn and turf (2 weeks)

Specific objectives:

To learn lawn seeding, sodding and plugging
 To learn proper lawn maintenance techniques
 To learn the techniques of renovation for lawn problems

- A. Provides proper drainage in the lawn
- B. Prepares the soil
- C. Seeds and fertilizes the lawn
- D. Chooses types of grass and varieties
- E. Applies lime and fertilizers
- F. Mows the lawn

IV. Establishing and care of lawn and turf continued:

- G. Solves problems in the lawn
- H. Understands why lawns fail
- I. Learns renovation techniques

V. Mechanics in horticulture (6 weeks)

Specific objective:

To acquire skills necessary in horticulture

- A. Calculates land measurements
- B. Cuts common roof rafters
- C. Installs and repairs electrical circuits
- D. Installs plumbing and makes repairs
- E. Makes small engine repairs and adjustments
- F. Uses surveying equipment
- G. Learns tractor maintenance and repair

VI. Planning and preparing vegetable gardens (3 weeks)

Specific objectives:

To learn the proper selection and preparation of garden sites
 To learn the techniques of planting vegetables
 To learn proper care and maintenance of gardens
 To learn the recommended varieties of vegetables and fruits

- A. Selects garden sites
- B. Plans the garden to scale
- C. Takes a soil sample
- D. Becomes familiar with varieties of vegetables for Tennessee
- E. Learns planting dates for vegetables
- F. Demonstrates care and cultivation of the garden

VI. Planning and preparing vegetable gardens continued:

- G. Learns fertilizer requirements and application
- H. Understands weed control
- I. Learns methods of controlling insects and diseases
- J. Learns procedures for harvesting and storing vegetables

VII. Growing small fruit gardens (2 weeks)

Specific objectives:

To learn about strawberry production

To learn about the growing of brambles and other berries

- A. Becomes familiar with selection of varieties
- B. Selects sites for small fruits
- C. Plants small fruits
- D. Understands cultural practices for small fruits
- E. Learns disease and insect control procedures

VIII. Review and testing (1 week)

Specific objectives:

To review material covered to assure retention

To test to determine retention

- A. Reviews all material covered
- B. Completes final examination

COURSE CONTENT FOR HORTICULTURE II

(First Semester)

I. Orientation to Horticulture II (1 week)

Specific objectives:

To review school policy
To review safety procedures
To explore occupational opportunities
To review F.F.A. contests

A. Reviews general policy

1. School policy
2. Classroom and greenhouse policy

B. Reviews safety in the greenhouse and equipment areas

C. Learns specific occupational opportunities

D. Participates in F.F.A. contests open to second year students

II. Plant scientific names and characteristics (1 week)

Specific objectives:

To review the procedure for naming plants
To learn the characteristics of plants in relation to names
To learn the comparison of plant characteristics

A. Names plants, using scientific names

1. Common names
2. Scientific names
3. Variety names

B. Uses plant names

1. Leaf shapes
2. Margins

C. Characteristics of plants as used to identify them continued:

3. Growth habits

III. Identification of plants (1 week)

Specific objectives:

To learn how to recognize plants

To learn to use plant dictionaries

A. Recognizes plants by their flowers

B. Recognizes by leaf arrangement

C. Recognizes by growing habit

D. Uses plant dictionaries

IV. Propagation of plants by seed (1 week)

Specific objectives:

To learn the function of seed parts

To learn the germination time and requirements

To learn about seeding and care of seedlings

A. Learns seed parts and their function

B. Learns requirements for germination

C. Learns seed viability

D. Learns germination media

E. Learns care of seedlings

F. Transplants seedlings

V. Evaluating soils for quality (4 weeks)

Specific objectives:

To review parts of the Tennessee soil card

To learn the soil classification

A. Figures waterholding capacity

V. Evaluating soils for quality continued:

- B. Classifies soils
- C. Estimates productivity
- D. Determines cultural practices for soils
- E. Determines mechanical practices for soils
- F. Judges soils with the Tennessee soil card

VI. Developing leadership abilities (5 weeks)

Specific objectives:

To learn advanced parliamentary procedure
To learn the techniques for competing successfully

- A. Assumes duties of a chairperson
- B. Serves as chairperson
 - 1. Handling various motions
 - 2. Handling various parliamentary procedures
 - 3. Participating in parliamentary contests
- C. Enters F.F.A. contests and applies for awards
 - 1. Filing applications
 - 2. Meeting requirements

VII. Propagation of plants (1 week)

Specific objectives:

To learn the methods of propagation vegetatively
To learn propagation by cuttings

- A. Propagates vegetatively
 - 1. Cutting
 - a. Softwood

1. Cutting continued:
 - b. Hardwood
 - c. Semi-hardwood
2. Layering
3. Divisions
4. Grafting and budding

B. Practices propagation skills

C. Prepares rooted cuttings

VIII. Managing the greenhouse (1 week)

Specific objective:

To practice management skills

- A. Mixes soils
- B. Pots and repots plants
- C. Figures bench space
- D. Provides lighting and shading requirements
- E. Mixes fertilizers and setting injector
- F. Mixes and sprays insecticides

IX. Flower arranging (2 weeks)

Specific objectives:

To learn the basic arrangement designs
To learn the basic rules for arranging

- A. Arranges shapes
 1. Circular
 2. Triangular
 3. Rectangular

A. Arranges shapes continued:

4. Hogarth curve

B. Practices placement of flowers

C. Practices use of greens

D. Uses fillers

E. Locates focus

X. Review and testing (1 week)

Specific objectives:

To review material covered to assure retention

To test to determine retention

A. Reviews all material covered

B. Takes final examination

COURSE CONTENT FOR HORTICULTURE II

(Second Semester)

I. Growing annuals (1 week)

Specific objectives:

To learn proper seeding methods
To learn proper transplanting methods
To learn cultural practices for annuals

- A. Prepares the propagation media
- B. Utilizes direct seeding versus seeding in flat
- C. Utilizes transplanting in pots versus 4, 6 or 8 trays
- D. Cares for seedlings in the greenhouse
- E. Sets annuals in the landscape
- F. Demonstrates culture of annual plants

II. Plants in the landscape (1 week)

Specific objectives:

To learn proper planting methods for landscape plants
To learn landscape plant identification and selection
To learn cultural practices for landscape plants

- A. Plants shrubs and trees
- B. Identifies landscape plants
- C. Studies considerations in placing plants in the landscape
- D. Cares for shrubs in the landscape
- E. Demonstrates spray programs for shrubs and trees

III. Establishing and care of lawns and turf (2 weeks)

Specific objectives:

**A
G
R
I
C
U
L
T
U
R
E
/
H
O
R
T
I
C
U
L
T
U
R
E**

URBAN HORTICULTURE

Specific objectives continued:

To learn the establishment and maintenance of lawns and turf
 To learn the proper renovation of lawns and turf
 To learn the proper fertilization of lawns and turf

- A. Prepares seed beds for lawn and turf
- B. Performs steps in renovation of lawns
- C. Demonstrates methods of establishing lawns and turf
- D. Demonstrates cutting and manicuring lawns and turf
- E. Controls weeds
- F. Determines diseases of lawns and turf
- G. Provides fertilization for lawns and turf

IV. Maintaining small power equipment (2 weeks)

Specific objectives:

To learn the types and uses of equipment
 To learn proper maintenance of small equipment

- A. Selects lawn and garden equipment
- B. Utilizes safety with small engines
- C. Performs daily maintenance of equipment
- D. Services small equipment
- E. Makes simple repairs of equipment

V. Horticulture skills (6 weeks)

Specific objective:

To develop the skills necessary for horticulture

- A. Uses safety with tools and equipment
- B. Measures land for seeding and fertilizing

V. Horticulture skills continued:

- C. Cuts and erects common rafters
- D. Installs a two-way and three-way circuit
- E. Installs water systems
- F. Makes simple repairs on water systems
- G. Lays out a building
- H. Figures cut and fill with surveying instruments
- I. Times a farm tractor
- J. Adjusts the garden tractor

VI. Floral shop skills (1 week)

Specific objectives:

To learn how to select flowers
 To learn how to take flower orders properly
 To learn how to judge flowers and arrangements

- A. Selects types of flowers
- B. Determines flower faults and selection
- C. Determines proper selection of flowers
- D. Determines criteria for placing arrangements
- E. Practices mechanics of taking a phone order

VII. Flower arranging (1 week)

Specific objectives:

To learn the basics of flower arranging
 To learn mechanics of arranging for specific occasions

- A. Learns basic shapes of arrangements
- B. Learns color in arrangements
- C. Makes simple table arrangements

VII. Flower arranging continued:

- D. Makes simple vase arrangements
- E. Makes altar arrangements

VIII. Landscape design and plans (3 weeks)

Specific objectives:

To learn the elements of landscape design
To learn how to make a landscape plan

- A. Learns elements of landscape design
 - 1. Simplicity
 - 2. Balance
 - 3. Proportion
 - 4. Focalization
 - 5. Rhythm and line
 - 6. Labeling
 - 7. Pricing
- B. Determines landscape inventories
- C. Prepares landscape plans
- D. Determines mechanics of locating plants in the landscape
- E. Identifies and selects landscape plants
- F. Itemizes and figures plant needs and costs
- G. Performs site planning and drawings
- H. Makes the planting plan

IX. Review and testing (1 week)

Specific objectives:

To review materials covered to assure retention

Specific objectives continued:

To test to determine retention

- A. Reviews all material covered
- B. Takes final examination

COURSE CONTENT FOR HORTICULTURE III

(First Semester)

I. Occupational guidance and orientation (2 weeks)

Specific objectives:

To review school policy
To learn safety procedures for horticulture
To explore career opportunities
To review F.F.A. contests and programs

A. Reviews general policy

1. School policy
2. Classroom and greenhouse policy

B. Reviews safety in the greenhouse and equipment area

C. Explores professional and clerical opportunities

D. Explores technical and production opportunities

E. Explores managerial, sales and service opportunities

F. Reviews F.F.A. contests and programs open to third-year students

II. Preparing for a horticulture occupation (1 week)

Specific objectives:

To learn agriculture salesmanship
To learn how to prepare a job application form
To learn techniques of interviewing

A. Studies selling of agricultural products

B. Fills out applications

C. Writes a resume'

D. Secures recommendations

E. Learns dress for an interview

**A
G
R
I
C
U
L
T
U
R
E
/
H
O
R
T
I
C
U
L
T
U
R
E**

URBAN HORTICULTURE

II. Preparing for a horticulture occupation continued:

- F. Answers questions during practice interview

III. Evaluating soils for quality (3 weeks)

Specific objectives:

To review the Tennessee soil judging card
To learn evaluation techniques

- A. Determines soil capability
- B. Determines cultural management
- C. Determines physical management
- D. Makes soil evaluations for home sites
- E. Judges Tennessee soils

IV. F.F.A. leadership (1 week)

Specific objectives:

To learn how to develop a program of work
To make revisions based on previous activities

- A. Reviews goals
- B. Reviews ways and means
- C. Sets new and realistic goals
- D. Reviews successes and failures

V. Growing specialty crops (2 weeks)

Specific objectives:

To learn the scheduling for specialized crops
To learn the scheduling of flowering times

- A. Grows chrysanthemums
- B. Grows poinsettias
- C. Forces azaleas

V. Growing specialty crops continued:

- D. Propagates Easter lilies
- E. Grows cut roses

VI. Conducting a meeting (4 weeks)

Specific objectives:

To learn the techniques for conducting a meeting
To practice serving as chairperson

- A. Plans an agenda
- B. Handles various motions
- C. Handles parliamentary procedure
- D. Serves as chairperson

VII. Constructing corsages (1 week)

Specific objectives:

To learn corsage design
To learn corsage construction

- A. Learns corsage guidelines
- B. Prepares materials
- C. Wires and tapes for flowers
- D. Practices bow construction
- E. Assembles corsages

VIII. Growth and care of seedling (1 week)

Specific objectives:

To learn special treatments for seeds
To learn the mixing of special growing media

- A. Treats difficult seed for germination
- B. Mixes peat lite formulas

VIII. Growth and care of seedling continued:

- C. Uses other non-soil mixes
- D. Fertilizes seedlings

IX. Flower arrangements (2 weeks)

Specific objectives:

To learn the care and conditioning of cut flowers
To learn the placement of flowers in different designs

- A. Selects flowers and foliage
- B. Performs storage of cut flowers and foliage
- C. Supports stems
- D. Wires cut flower stems
- E. Constructs basic designs

X. Review and testing (1 week)

Specific objectives:

To review materials covered to assure retention
To test to determine retention

- A. Reviews all material covered
- B. Takes final examination

COURSE CONTENT FOR HORTICULTURE III

(Second Semester)

I. Growing greenhouse crops (4 weeks)

Specific objectives:

To learn the proper utilization of the school greenhouse
To review growing of specialty crops
To review growing bedding plants

- A. Uses the school greenhouse
- B. Makes minor repairs of the greenhouse
- C. Winterizes the greenhouse
- D. Finishes Easter lilies
- E. Schedules specialty crops
- F. Identifies uses of annual and perennial flowers
- G. Prepares the soil for annual and perennial flowers
- H. Performs aftercare of annual flowers

II. Floral design and management (2 weeks)

Specific objectives:

To review taking phone orders
To learn how to figure the cost of florals
To learn to plan weddings

- A. Takes phone orders
 - 1. Determining customer's needs
 - 2. Filling out order forms
- B. Prices flowers used in florals
- C. Plans weddings

C. Planning weddings continued:

1. Determining desires of the bride
 - a. Flowers
 - b. Colors
 - c. Bridesmaids and groomsmen
 - d. Basic designs
2. Other decorations
3. Arranging the line of march
4. Distribution of costs
5. Rehearsal and rehearsal dinner
6. The ceremony

III. Maintaining small engines (1 week)

Specific objective:

To learn to make simple small engine repairs

- A. Learns safety precautions with engines
- B. Replaces the sparkplug
 1. Selecting correct plugs
 2. Setting the spark gap
- C. Sharpens the blade
- D. Replaces the muffler

IV. Developing and improving skills (2 weeks)

Specific objectives:

To acquire skills applicable to horticulture
To practice skills for proficiency

IV. Developing and improving skills continued:

- A. Practices land measuring
- B. Practices differential leveling
- C. Practices electrical installations
- D. Practices plumbing repairs and installation
- E. Practices machinery maintenance

V. Growing nursery plants (1 week)

Specific objective:

To learn the production of nursery plants

- A. Produces narrow leaf evergreens
- B. Produces broadleaf evergreens
- C. Produces deciduous trees
- D. Produces deciduous shrubs
- E. Produces ground cover

VI. Occupational guidance (1 week)

Specific objectives:

To review applying for a job

To review going for the job interview

- A. Fills out applications
- B. Practices role playing the job interview

VII. Planning the landscape (3 weeks)

Specific objective:

To review planning the landscape

- A. Analyzes the landscape site
- B. Plans the outdoor room concept

VII. Planning the landscape continued:

- C. Selects plants for the landscape
- D. Draws landscape plans
- E. Prices the proposed plan
- F. Plans enrichments for the landscape

VIII. Spraying fruit trees (1 week)

Specific objectives:

To learn how to select spray materials
 To learn how to calibrate spray equipment
 To learn fruit spray schedules

- A. Selects sprays for fruits
 - 1. Apples
 - 2. Peaches
 - 3. Grapes and small fruit
- B. Sets spray equipment
- C. Mixes sprays
- D. Determines schedule

IX. Growing roses (2 weeks)

Specific objectives:

To learn pot rose production
 To learn outdoor production of roses

- A. Learns varieties for pot production
- B. Prepares potting mixtures for pot production
- C. Determines varieties for outdoor production
- D. Sets roses
 - 1. Pots

D. Setting roses continued:

2. Outdoor

E. Controls insects and diseases

F. Fertilizes roses

X. Review and testing (1 week)

Specific objectives:

To review materials covered to assure retention

To test to determine retention

A. Reviews all material covered

B. Takes final examination

COURSE CONTENT FOR HORTICULTURE IV

(First Semester)

I. Occupational guidance and orientation (2 weeks)

Specific objectives:

To review school policy
To explore job opportunities
To learn safety procedures for horticulture
To review F.F.A. contests and programs

A. Reviews general policy

1. School policy
2. Classroom and greenhouse policy

B. Reviews safety in the greenhouse and equipment area

C. Reviews filling out an application

D. Reviews going for a job interview

E. Reviews course requirements

F. Reviews programs and contests open to fourth-year students

G. Reviews horticulture co-op programs

II. Identifying plants used in home and landscape (1 week)

Specific objectives:

To learn the use of plant identifying guides
To learn identification techniques

A. Compares leaf arrangement, structure and shape

B. Compares bark structure and color

C. Uses growth habits in identification

D. Reads plant guides and codes

III. Revising programs of work (1 week)

Specific objectives:

To learn to compare goals and objectives in light of changes
To learn to set realistic ways and means

- A. Reviews long and short range goals
- B. Analyzes changes in light of goals
- C. Sets ways and means in tune with the economic picture
- D. Revises plans in light of needed changes

IV. Soil mixes (1 week)

Specific objectives:

To learn the composition of various soil mixes
To learn the comparison of mixes in providing plant needs
To learn the procedure for deciding mixes to use

- A. Determines ingredients in soil mixes
- B. Determines fertilizer additives
- C. Determines plant needs and which mixes best meet them
- D. Determines essential plant food elements
- E. Matches mixes to plant needs

V. Repotting orchid plants (1 week)

Specific objectives:

To learn the procedure for dividing orchids
To learn the mixing of growing media
To learn repotting procedure

- A. Practices steps in dividing orchids
 - 1. Cattalias
 - 2. Cymbidiums
 - 3. Dendroviums

V. Repotting orchid plants continued:

- B. Combines ingredients
- C. Provides fertilizers
- D. Determines steps in repotting

VI. Evaluating soils for quality (2 weeks)

Specific objectives:

To review criteria for evaluating soils
To practice soil judging

- A. Studies the Tennessee soil card for problems
- B. Reviews problem areas of the card
 - 1. Water holding
 - 2. Determining class
 - 3. Determining crop production
 - 4. Providing lime
- C. Judges soil pits

VII. Operating a garden center (1 week)

Specific objectives:

To learn garden center layout and planning
To learn pricing and labeling of stock
To have select merchandise
To learn about inventory and replacing stock

- A. Learns desirable features of a garden center
- B. Learns lath house construction
- C. Learns plant stock considerations
- D. Learns mark up practices
- E. Learns labeling practices

VII. Operating a garden center continued:

- F. Learns inventory considerations

VIII. Floral shop employment (1 week)

Specific objectives:

To learn the techniques of customer relations
To learn the personal requirements for selling
To learn how to figure a bill

- A. Studies personal grooming
- B. Studies knowledge of merchandise
- C. Studies using business mathematics
- D. Studies personal selling techniques
- E. Studies closing the sale
- F. Studies answering the telephone

IX. Conducting a meeting (4 weeks)

Specific objective:

To develop proficiency in serving as chairperson

- A. Reviews parliamentary procedures
- B. Practices serving as chairperson
- C. Competes in parliamentary contests

X. Managing specialty crops (2 weeks)

Specific objectives:

To learn the techniques of finishing chrysanthemums
To learn the techniques of finishing poinsettias
To learn the techniques of cutting and caring of roses

- A. Uses debudding spray and pot mums
- B. Adjusts rate of fertilizers

X. Managing specialty crops continued:

- C. Dresses pots for delivery
- D. Pinches roses to meet different flowering dates
- E. Cuts roses to insure increased flowering
- F. Grades and bundles roses
- G. Stores roses before delivery

XI. Making holiday arrangements and corsages (1 week)

Specific objective:

To learn to make arrangements and corsages

- A. Makes evergreen wreaths
- B. Makes holiday arrangements
- C. Makes holiday corsages

XII. Review and testing (1 week)

Specific objectives:

To review materials covered to assure retention
To test to determine retention

- A. Reviews all material covered
- B. Takes final examination

COURSE CONTENT FOR HORTICULTURE IV

(Second Semester)

I. Using the school greenhouse (3 weeks)

Specific objectives:

To learn how to produce azaleas
To learn how to produce carnations
To learn how to produce Easter lilies

- A. Propagates azaleas, carnations and lilies
- B. Practices liner production of azaleas
- C. Forces azaleas
- D. Precools lily bulbs
- E. Forces lilies
- F. Trains and times carnations
- G. Disbuds carnations
- H. Harvests and grades carnations

II. Planning weddings (2 weeks)

Specific objectives:

To learn how to plan a wedding
To learn the financial responsibilities for weddings
To learn seating and line arrangements

- A. Plans steps in planning weddings
- B. Plans responsibilities of the bride's parents
- C. Plans responsibilities of the groom's parents
- D. Plans the line of march
- E. Plans seating for rehearsal dinner

II. Planning weddings continued:

- F. Decides flower decorations
- G. Studies wedding etiquette

III. Maintaining small engines (1 week)

Specific objectives:

To learn daily maintenance
To learn to make minor repairs

- A. Learns lubrication points
- B. Sets spark plug gap
- C. Makes minor repairs

IV. Developing mechanical skills (2 weeks)

Specific objective:

To develop proficiency in mechanical skills (2 weeks)

- A. Practices land measuring
- B. Practices differential leveling
 - 1. Figuring cut and fill
 - 2. Laying out foundations
- C. Makes electrical installations
- D. Makes plumbing measurements and connections

V. Producing container grown plants (3 weeks)

Specific objectives:

To learn the construction and care of terrariums
To learn the construction of bonsai plantings
To learn to maintain interior landscape plants

- A. Prepares terrariums for planting
- B. Selects plants for terrariums

V. Producing container grown plants continued:

- C. Practices culture of terrariums
- D. Practices steps in constructing bonsai plantings
- E. Chooses plants for bonsai
- F. Grows dwarf plants
- G. Studies major concerns of house plants
- H. Studies culture of house plants
- I. Controls diseases and insects of plants

VI. Landscaping (3 weeks)

Specific objectives:

To learn the principles of landscaping
 To learn the selection of plant materials
 To learn the principles of maintenance

- A. Designs plantings
 - 1. Simplicity
 - 2. Balance
 - 3. Proportion
 - 4. Focalization
 - 5. Rhythm and line
- B. Completes landscape plans
- C. Selects plants to complete the plan
- D. Performs cultural practices of landscape plants
 - 1. Care of plants
 - 2. Staking and guying
 - 3. Mulching

D. Cultural practices of landscape plants continued:

4. Fertilizing
5. Pruning
6. Controlling insects and diseases

VII. Designing a spray program for fruit (1 week)

Specific objectives:

To learn the methods of spraying fruit trees
To learn to mix different fruit formulas
To learn to calibrate the equipment

- A. Uses spray equipment
- B. Plans spray schedules
 1. Dormant
 2. Pink
 3. Remaining
- C. Mixes chemicals
- D. Calibrates sprayers for best results

VIII. Floral design (2 weeks)

Specific objectives:

To learn to design flower arrangements
To learn to figure design costs
To learn to use roses in designs

- A. Learns design for special occasions
- B. Prices floral designs
 1. Figure costs
 2. Design mark up
- C. Selects and uses roses

C. Selects and uses roses continued:

1. Quality
2. Wiring
3. Conditioning

IX. Review and testing (1 week)

Specific objectives:

To review materials covered to assure retention

To test to determine retention

- A. Reviews all material covered
- B. Takes final examination

RESOURCE MATERIALS

Textbooks

- Ahrens, Donald L., Hoerner, Harry J. and Bear, W. Forest. Small Gasoline Engines Operations and Maintenance. St. Paul, Minnesota: Hobart Publications, 1973.
- Ball, George J., Inc., Staff of. The Ball Red Book, 13th Edition. Chicago, Illinois, 1978.
- Briggs and Stratton Corp. Service and Repair Instructions. Milwaukee, Wisconsin, 1984.
- Condver, H. S. Grounds Maintenance Handbook. New York: McGraw-Hill Book Company, Inc., 1958.
- Dirr, Michael A. Manual of Wood Landscape Plants. Champaign, Illinois: Stipes Publishing, 1977.
- Hartmann, Hudson T. and Kester, Dale E. Plant Propagation Principles and Practices. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1959.
- Hirsch, Doris F. Indoor Plants. Radnor, Pennsylvania: Chilton Book Company, 1977.
- Ingels, Jack E. Landscape Principles and Practices. Albany, New York: Delmar Publishers, Inc., 1978.
- Ingels, Jack E. Landscaping, 2nd Edition. Albany, New York: Delmar Publishers, Inc., 1983.
- Janick, Jules. Horticulture Science. San Francisco, California: W. H. Freeman & Company, 1963.
- Jones, Mack M. Shopwork on the Farm. New York: McGraw-Hill Book Company, Inc., 1955.
- Kelsey, Harland P. and Dayton, William A. Standardized Plant Names. American Joint Committee on Horticulture Nomenclature, J. Horace McFarland Company, 1942.

Textbooks continued:

- Korpi, Leo L., et. al. Profitable Soil Management. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1970.
- McDaniel, Gary L. Floral Design and Arrangement. Reston, Virginia: Reston Publishing Company, 1981.
- McDaniel, Gary L. Ornamental Horticulture, 2nd Edition. Reston, Virginia: Reston Publishing Company, 1982.
- Musser, H. Burton. Turf Management. New York: McGraw-Hill Book Company, Inc., 1962.
- Nelson, Jr., William R. Landscaping Your Home, Circular III, Revised Edition. Urbana-Champaign, Illinois: University of Illinois, College of Agriculture Cooperative Extension Service, 1977.
- Parson, Robert L., et. al. Conserving American Resources. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1972.
- Pennsylvania State University, College of Agriculture. Retail Flower Shop Operation and Management, Student Handbook, Teacher Education Series, Vol. 9, No. 1. University Park, Pennsylvania, 1968.
- Pfahl, Peter B. Retail Florist Business, 3rd Edition. Danville, Illinois: Interstate Printers and Publishers, 1977.
- Pinney, John J. Operating a Garden Center. Chicago, Illinois: American Nursery Man, 1967.
- Progressive Farmer/Southern Living. Vegetable Gardening. Birmingham, Alabama: Southern Living Books, 1972.
- Reiley, H. Edward and Shry, Jr., Carroll L. Introductory Horticulture, 2nd Edition. Albany, New York: Delmar Publishers, Inc., 1983.
- Robinson, James H. and Elder, Joe A. Soil Judging Guide for Youth and Adults. Knoxville, Tennessee: Agricultural Extension Service, U. T.-Knoxville Publications 727, 1978.
- Scheer, Arnold and Juergenson, Elwood M. Approved Practices in Fruit Production. Danville, Illinois: Interstate Printers and Publishers, Inc. 1964.
- Small Engines Service Manual. Kansas City, Missouri: Implement and Tractor Publications, Inc., 1978.

Textbooks continued:

Small Engine Service and Repair Instructions. Milwaukee, Wisconsin: Briggs & Stratton, 1983.

Stratman, Tressa S. Retail Floriculture, Book I and II. Columbus, Ohio: Ohio State University, 1976.

Urbanic, Charles E. The Nursery Worker, Part I and II. Columbus, Ohio: Ohio Agriculture Education Curriculum Service, Ohio State University, 1973.

Ware, George W. and McCollum, J. P. Raising Vegetables. Danville, Illinois: Interstate Printers and Publishers, Inc., 1959.

Wells, James S. Plant Propagation Practices. New York: MacMillan Co., 1955.

Curriculum Guides

Ornamental Horticulture Competency Based Curriculum, Vol. I through VIII. State Department of Education, Vocational-Technical Division, Nashville, Tennessee, 1982.

Audio Visual

Filmstrips

California State Polytechnic College, 1972

Flower Arranging Beginning, 87 frames

Lawns and Ground Cover, 58 frames

Fertilizing Ornamental Plants, 50 frames

Terrariums and How to Make Them, 60 frames

Pruning, Elements of, 50 frames

Propagation of Ornamentals, 55 frames

Filmstrips continued:

Growing Media for Ornamentals, 48 frames

Controlling Pests for Ornamentals, 43 frames

Plant Identification, 75 frames

Encyclopedia Britannica

How Soil is Formed, 55 frames

Saving Our Soils, 50 frames

Vocational Agriculture Service, Urbana, Illinois

Soil Color, 50 frames

Sam Houston State Teachers College, 1956

Parliamentary Procedures, Volume I, II and III, 29 frames

Department of Agriculture Education, University of Georgia

Ornamental Plantings, Volume I & II, 48 frames

Agriculture Education and Landscape Division, University of Georgia, Athens

Landscaping and Homestead, Volume I, II, III & IV,

Colonial Films

Planning Forest Enterprises, 50 frames

Slide Sets

Introduction to Greenhouse Work, Ohio Agriculture Education Curriculum Materials Service, 151 slides, 1981

Greenhouse Structure, Ohio Agriculture Education Curriculum Materials Service, 66 slides

Landscape Contest Plants, Media Systems Inc., 1978, 250 slides

Greenhouse Energy Management, Part I and II, Media Systems Inc., I-150 slides, II-115 slides

Slide Sets continued:

Greenhouse Crops, Ohio Agriculture Education Curriculum Materials Service, 1982, 61 slides

Bedding Plants, Ohio Agriculture Education Curriculum Materials Service, 1981, 49 slides

Common Insects of Greenhouse Crops, Ohio Agricultural Education Curriculum Materials Service, 1981, 47 slides

Cut Flowers, Ohio Agricultural Education Curriculum Materials Service, 1977, 31 slides

Corsage Construction, Ohio Agricultural Education Curriculum Materials Service, 1980, 101 slides

Floral Tributes, Ohio Agricultural Education Curriculum Materials Service, 1981, 112 slides

Silk Wedding Arrangements, Ohio Agricultural Education Curriculum Materials Service, 1980, 89 slides

Landscape Design, Ohio Agricultural Education Curriculum Materials Service, 1980, 187 slides

Transplanting and Staking Landscaping Plants, Ohio Agricultural Education Curriculum Materials Service, 1980, 103 slides

Flower Arranging, Ohio Agricultural Education Curriculum Materials Service, 1978, 101 slides

Other

FFA and You, Interstate Publishers, 1964

Student Handbook FFA, Future Farmer Supply Service